Quantitative Data:

- Measured data, with units
- Useful to graph

- Histograms:
  - Groups quantitative data together in a distribution.
  - Width of each bar is called the bin width. Bin widths must be the same for the histogram.
  - Any bin with no data will be a gap in the data.
  - We can make either frequency (counts) or relative frequency (percentages) histograms.
  - Example on notes:

    y-axis is frequency → number of counts

    70-74 feet → 8 trees
  - to find total number of counts in the study, add the counts of all the bins

    60-64 feet → 3 trees

    65-69 feet → 3 trees

    70-74 feet → 8 trees

    75-79 feet → 10 trees

    80-84 feet → 5 trees

    85-89 feet → 2 trees

    31 trees

Stem and Leaf Display

- Like a histogram, but shows individual values.
- On example, stem is tens place and leaves are ones place
- Stems can be either in ascending or descending order

stem (tens place)	leaf (ones place)
9	0 4
8	3 4 5 7 9
7	0 2 2 9
6	5 8 9
5	3

Test Grade (points)

Variable (unit)

- Most basic way to show data

Dot Plot:

- Simply puts a dot next to an axis for each case
- The dots are counts of number of times some thing happens
- On example, dots represent number of times random number occurs

Atlanta

2	6 8 9
3	1 2 2 2 2 2 4 4 6 8
4	0 0 4 4 7
5	0 0 2 2 3 5
6	6 3
7	0

Philadelphia

2	5
3	0 0 0 0 2 2 3 4
3	6 6 6 8 8 9 9
4	0 0 0 0
5	0 3 4 8
6	1

allowed to break into two stems, but you lose ability to easily see that the 30's have the most buildings

Paper Airplanes:

1. Each person makes an airplane.
2. Each person throws airplane 5 times.
3. Record distance of plane (1 block = 1 foot).
4. Make histogram.

TURN IN TOMORROW!